154186 Area (5)

DEPARTMENT OF HEALTH & HUMAN SERVICES

Public Health Service
Agency for Toxic Substances
and Disease Registry

REGION III

88 JUN 16 AM11:02

Memorandum

Date June 6, 1988

From Assistant Director for Health Assessment Coordination
Office of Health Assessment

Subject Preliminary Health Assessment:
American Electronics Lab, Montgomery, Pennsylvania

To Charles J. Walters
Public Health Advisor
EPA Region III

Enclosed are copies of the Preliminary Health Assessment for American Electronics Lab. We have received and taken into account your comments and those of the EPA Regional Office in the enclosed final document. Although the ATSDR Communications Procedures (ATSDR Transmittal Notice TN-88.7) indicates that HACA will transmit completed Preliminary Health Assessments directly to the designated Regional EPA Branch Chief (with a cc to the ATSDR Regional Representative), this person has not yet been finally identified by EPA Headquarters. In the interim, would you please forward one of the enclosed copies to the appropriate Branch Chief. We appreciate your cooperation and assistance, especially during this transition period as we implement the new Communications Procedures.

Stephen D. Von Allmen

cc:
M. Bashor
G. Buynoski
B. Johnson
H. Longest

AR300315

Health Assessment for

AMERICAN ELECTRONICS LAB

MONTGOMERY, PENNSYLVANIA

MAY 4, 1988

AR300316

THE ATSDR HEALTH ASSESSMENT: A NOTE OF EXPLANATION

Section 104(i)(7)(A) of the Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA), as amended, states "...the term 'health assessments' shall include preliminary assessments of potential risks to human health posed by individual sites and facilities, based on such factors as the nature and extent of contamination, the existence of potential pathways of human exposure (including ground or surface water contamination, air emissions, and food chain contamination), the size and potential susceptibility of the community within the likely pathways of exposure, the comparison of expected human exposure levels to the short-term and long-term health effects associated with identified hazardous substances and any available recommended exposure or tolerance limits for such hazardous substances, and the comparison of existing morbidity and mortality data on diseases that may be associated with the observed levels of exposure. The Administrator of ATSDR shall use appropriate data, risk assessments, risk evaluations and studies available from the Administrator of EPA."

In accordance with the CERCLA section cited, ATSDR has conducted this preliminary health assessment on the data in the site summary form. Additional health assessments may be conducted for this site as more information becomes available to ATSDR.

PRELIMINARY HEALTH ASSESSMENT

AMERICAN ELECTRONICS LAB
MONTGOMERY, PENNSYLVANIA
May 4, 1988

Prepared by:
Office of Health Assessment
Agency for Toxic Substances and Disease Registry (ATSDR)

Background

The American Electronics Lab (AEL) is listed by the U.S. Environmental Protection Agency (EPA) on the National Priorities List (NPL). AEL is a 20 acre site located in Montgomeryville (Montgomery County) Pennsylvania. AEL is located 950 feet north of the west branch of Neshaminy Creek. The active site currently produces communications equipment. Trichloroethylene was used as a degreasing agent in the cleaning of equipment. Drums containing the solvent leaked their contents onto the soil. Contamination of groundwater with 1,1,1-trichloroethane (TCA) and trichloroethylene (TCE) (and its respective degradation products) was discovered in 1979. The site is not entirely fenced. An on-site groundwater cleanup program is currently in operation.

Environmental Contamination And Physical Hazards

On-site soils are contaminated with TCE at concentrations of 50 ppm. Trichloroethylene (TCE) is the main contaminant of concern and has been detected in on-site soil (50 ppm) and groundwater (266 to 500 ppb). Other contaminants detected on-site include 1,1,1 trichloroethane (3 to 18 ppb), cis-1,2 dichloroethylene (7 ppb), 1,1 dichloroethylene (2 ppb), and 1,1 Dichloroethane (2.5 ppb). Site related contaminants have been detected in off-site wells at lower levels. Physical hazards were not reported for this site.

Potential Environmental And Human Exposure Pathways

Potential environmental pathways could include contaminated groundwater, surface water, soil, and/or air. Potential human exposure pathways could include ingestion of contaminated groundwater and surface water and/or soils; inhalation of contaminant-entrained dust and particulates; dermal contact with contaminated groundwater, surface water, and/or soils;and/or consumption of contaminated elements of a food chain.

Demographics

The population size within a mile radius of the site was not known at the time this report was prepared. The distance from the site to the nearest residence is approximately one hundred yards.

AMERICAN ELECTRONICS LAB., MONTGOMERY, PENNSYLVANIA

Evaluation And Discussion

On-site workers may come into contact with contaminated soil and groundwater through direct contact, ingestion, and inhalation. Private wells exist within a mile radius of the site and are used for potable purposes. Monitoring wells sampled demonstrated TCE concentration of 1 to 6 ppm. These concentrations are of significant health concern if the contaminated groundwaters are ingested. Therefore, it is imperative to further characterize this site, especially groundwater contamination, and to conduct area well surveys to insure that residents are not presently exposed. Currently available information is limited and precludes further evaluation or discussion of the potential health implications of this site.

ATSDR is preparing a Toxicological Profile on TCE.

Conclusion And Recommendations

From the information available, the site is considered to be of potential public health concern to on-site workers and possibly area residents using private wells located downgradient from the site because of the risk to human health caused by the possibility of human exposure to hazardous substances. Accordingly, future investigations of this site should include a survey of wells used in the area, characterization of the site and site contaminants, samples of residential wells for known site contaminants (or priority pollutants), and a characterization of the hydrogeology of the area.

Further environmental characterization and sampling of the site and impacted off-site areas during the Remedial Investigation and Feasibility Study (RI/FS) should be designed to address the environmental and human exposure pathways discussed above. When additional information and data become available, e.g., the completed RI/FS, such material will form the basis for further assessment by ATSDR at a later date.